

C. REMARKS/ARGUMENTS

1. Allowable Subject Matter

Applicant notes with appreciation that claims 12-17 have been allowed

Applicant notes with appreciation that claim 4 (depending on claim 1) has been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant has not rewritten claim 4 in independent form, in the belief that independent claim 1 is allowable, as discussed below.

2. Rejection of Claims 1, 3, and 6-11 Under 35 U.S.C. § 102(b)

Claims 1, 3 and 6-11 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Pat. No. 5,059,266 to Yamane ("Yamane"). Applicant respectfully traverses.

In response to the Examiner's rejection above, Applicant has amended claim 1, to add additional limitations directed to first, second, and third valves that are configured to regulate extrusion by the first, second, and third nozzles, respectively.

Amended claim 1 is set forth below:

1. (currently amended) A multi-nozzle assembly comprising:
 - a first nozzle configured to extrude a first material through a first outlet;
 - a second nozzle configured to extrude the first material through a second outlet;
 - a third nozzle configured to extrude a second material different from the first material through a third outlet, the third outlet being between the first and second outlets;
 - a first valve configured to regulate flow of the first material to the first nozzle;
 - a second valve configured to regulate flow of the first material to the second nozzle;
 - a third valve configured to regulate the extrusion of the second material by the third nozzle; and
 - a valve controller in communication with the first, second, and third valves, and configured to control the first, second, and third valves so as to allow, during a first

time period, extrusion of the first material by the first and second nozzles while not allowing any extrusion of the second material by the third nozzle, then to allow, during a second time period, extrusion of the first material by the first and second nozzles as well as extrusion of the second material by the third nozzle.

No new material is added by the amendment above. Support for these amendments can be found in Applicant's specification, including but not limited to paragraph [0076] of Applicant's specification, set forth below:

"[0076] . . . A servo motor 1025 may be used to control an internal gate valve (not shown) that is used to regulate the flow of material to the exterior nozzle 1003. Similarly, a servo motor 1023 may be used to control an internal gate valve (not shown) that is used to regulate the flow of material to the interior nozzle 1007. The flow of material to the central nozzle 1011 may also be regulated in a similar or different manner."

Applicant submits that claim 1, as currently amended, is not anticipated by Yamane. Yamane teaches ink jet heads, which spray ink. In particular, Yamane teaches the jetting of photosetting resin by ink jet heads, to print a matrix of dots to create various colors. Yamane does not anticipate amended claim 1, because Yamane does not teach or suggest at least the following limitations of amended claim 1:

a first valve configured to regulate flow of the first material to the first nozzle;

a second valve configured to regulate flow of the first material to the second nozzle;

a third valve configured to regulate flow of the second material by the third nozzle; and

a valve controller in communication with the first, second, and third valves, and configured to control the first, second, and third valves so as to allow, during a first time period, extrusion of the first material by the first and second nozzles while not allowing any extrusion of the second material by the third nozzle, then to allow, during a second time period, extrusion of the first material by the first and second nozzles as well as extrusion of the second material by the third nozzle.

In Applicant's present application, the flow of material to each nozzle can be regulated by a respective valve, as described e.g. in paragraph [0076] above. The valves are controlled by the valve controller in such a way that, during a first pass of the nozzle assembly, material is extruded only through a first (interior) and a second (exterior) nozzle, while no material may be extruded through a third (central) nozzle.

This causes two rim layers to be extruded during the first pass, namely an exterior rim layer and an interior rim layer of material. These rim layers are then left to cure and harden. Then, a second layer of rim material is extruded on top of the hardened rim layers, by the first and second nozzles. This may result in a second interior rim layer to be extruded on top of the first (hardened) interior rim layer, and a second exterior rim layer to be extruded on top of the first (hardened) exterior rim layer. At the same time, a filler layer is extruded between the first (hardened) interior and exterior rim layers, that are underneath the second interior and exterior rim layers. The nozzle assembly repeats this sequence of steps, until the height of the wall reaches the needed level.

The above is described, e.g., in Applicant' specification, paragraphs [0060], [0061], [0062], [0063], and [0065]:

[0060] *As shown in FIG. 4(a), a first layer of a wall 403 may be extruded by moving the nozzle assembly 301 in a horizontal direction and by extruding material only through the exterior nozzle 303 and the interior nozzle 305. During this pass, no material may be extruded from the central nozzle 307.*

[0061] *This approach may cause an exterior rim layer 405 and an interior rim layer 407 of material to be extruded. . . .*

[0062] *The rim layers may then be left to cure and thus harden. . . .*

[0063] *As shown in FIG. 4(b) another rim layer may be extruded on top of the rim layer that has hardened. This may consist of a second exterior rim 413 being extruded on top of the first exterior rim 405 and a second interior rim 415 being extruded on top of the first interior rim 407. A first filler layer 411 may also be extruded between the first rim layers 405 and 407 by extruding material from the central nozzle 307 at the same time that the second rim layers 413 and 415 are being extruded. . . .*

[0065] *The process may be repeated until the height of the wall 403 reaches the needed level. . . . After the last needed rim layers are extruded, the next pass may extrude only a filler layer, thus completing the wall structure.*

No such first, second, and third valves are disclosed in Yamane, nor is any valve controller disclosed in Yamane that controls these valves in the manner described above.

The Examiner refers to Fig 12, #s 111, 112, 133, 114, 115, and col. 6, line 56 of Yamane, as support for his assertion that Yamane teaches a valve controller configured to regulate extrusion by the nozzles in the manner recited in claim 1. Applicant respectfully disagrees.

Applicant notes that Fig 12, #s 111, 112, 133, 114, 115, and col. 6, line 56, do not relate to a valve controller, nor to a valve controller that regulates the extrusion by the first, second, and third nozzles in the manner recited in claim 1.

Instead, Fig 12 #s 111, 112, 133, 114, 115 of Yamane relate to computer control units for manipulating data, and to various motion controllers:

- Fig 12 # 111 is *"a control unit 111 comprising a host computer for forming a three-dimensional model and slicing the model into data of plural thin sectional parts."* Yamane Col. 6, lines 9-12.
- Fig 12 # 112 is *"a drive control unit 112 for receiving data of the sectional parts from the control unit 111 and controlling various elements for performing a forming process in accordance with the data."* Yamane Col. 6, lines 12-15.
- Fig 12 # 113 is *"an X, Y-axes control device 113 for controlling a movement of the ink jet heads 116 to 118 in the X- and Y-directions"* Yamane Col. 6, lines 15-17.
- Fig 12 # 114 is *"a rotational movement control device 114 for controlling a rotational movement of the ink jet heads 119 to 121 around the forming stage 131."* Yamane Col. 6, lines 17-20.
- Fig 12 # 115 is *"a Z-axis control device 115 for controlling a movement of the forming stage 131 in the Z-direction."* Yamane Col. 6, lines 20-22.

Col. 6, line 56 of Yamane states: *"the two arrays, and then on of the photosetting resins,"* and also does not relate to a valve controller that regulates extrusion by nozzles in the manner recited in claim 1.

Regarding the limitation in claim 1 pertaining to the valve controller, the Examiner states: *"while the exact method of control may or may not be taught, such method limitations have no weight - - instead the control structure is taught that enables the device to be capable of the claimed control."*

Applicant traverses.

Applicant submits that, contrary to the above statement by the Examiner, the limitations in claim 1 that recite how the valve controller regulates extrusion by the first, second, and third nozzles, are functional limitations, which do have weight, and

must be evaluated and considered, just like any other limitation of the claim. See e.g. MPEP 2173.05(g):

Functional Limitations: (boldface in original)

*A functional limitation is an attempt to **define something by what it does**, rather than by what it is (e.g., as evidenced by its specific structure . . .). There is nothing inherently wrong with defining some part of an invention in functional terms. . . .*

*A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. **A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.** (boldface added).*

As set forth e.g. in MPEP 2173.05(g) reproduced above, functional limitations (such as the limitation in claim 1 directed to the function of the valve controller) do have weight, and must be considered just like any other limitation.

For all of the reasons above, Applicant respectfully submits that Yamane does not teach or suggest at least the above-discussed limitations in claim 1 directed to the first, second, and third valves, and to the valve controller that controls the first, second, and third valves. Because Yamane fails to teach or suggest all the limitations of claim 1, Yamane does not anticipate the invention as recited in claim 1. Applicant respectfully submits that claim 1 is allowable.

Claims 3, 6-11

Claims 3 and 6-11 depend on claim 1, and therefore include all the limitations of amended claim 1. For all the reasons discussed above, claim 1 is not anticipated under 35 U.S.C. § 102 (b) by the Yamane document. It follows that claims 3 and 6-11 (all depending from amended claim 1) also are not anticipated by Yamane under 35 U.S.C. §102(b).

3. Rejection of Claims 2 and 5 Under 35 U.S.C. § 103(a)

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane. Applicant respectfully traverses.

As known, “[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.” MPEP 2143.03; In re Fine, 837 F.2d 1071, 2 USPQ2d 1596 (Fed. Cir. 1988).

Claims 2 and 5 all depend on claim 1, and therefore include all the limitations of claim 1. For all the reasons discussed in section 2 above, claim 1 is nonobvious under 35 U.S.C. 103 over Yamane. Accordingly, it follows that claims 2 and 5 (all depending from claim 1) are also nonobvious under 35 U.S.C. 103 over Yamane.

Applicant respectfully submits that claims 2 and 5 are allowable.

4. Rejections of Claims 18-23 Under 35 U.S.C. § 102(b) over Moore, Melnick, Bangma, and Winter

Claims 18-23 stand rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Pat. No. 6,170,220 to Moore (“Moore”). Claims 18-23 also stand rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Pat. No. 5,664,382 to Melnick (“Melnick”). Claims 18-23 also stand rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Pat. No. 5,749,196 to Bangma (“Bangma”). Claims 18-23 also stand rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Pat. No. 4,833,855 to Winter (“Winter”). Applicant respectfully traverses these rejections of claims 18-23, in view of Applicant’s amendment of independent claim 18, discussed below.

CLAIM 18

In response to the above rejections, Applicant has amended independent claim 18. In particular, claim 18 has been amended to recite that each rim includes a plurality of homogeneous, unbroken, and separately discernable layers of a rim material, each rim layer in physical contact with one another other and stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked rim layer. Claim 18 has also been amended to remove the limitation that the filler material is different from the rim material, because such a limitation is already included in claim 19.

Amended Claim 18

Independent claim 18, as currently amended, is reproduced below:

A wall comprising:

a set of spaced apart rims, wherein each rim includes:

a plurality of homogeneous, unbroken, and separately discernable layers of a

rim material, each rim layer in contact with one another other and stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked rim layer; and

a filler between the rims, the filler including a plurality of separate layers of a filler material.

No new material is introduced by these amendments to claim 18. Support for these amendments can be found throughout Applicant's specification, including but not limited to:

- Support for limitations directed to a plurality of homogeneous, unbroken, and separately discernable layers of a rim material:

- Paragraphs [0049], [0051], [0054], [0055], and [0063] of Applicant's present specification state that each rim layer is formed by the extrusion of a layer of a liquid or quasi -liquid material from an inlet of a nozzle, that the material delivered to the inlet may have characteristics that cause the material to harden into a solid after extrusion, that layers of different thickness may be extruded, and that the next rim layer is extruded on top of that rim layer after that rim layer has hardened. These paragraphs support a recitation of rim layers that are homogeneous, unbroken, and separately discernable:

- FIG.s 4A, 4B, 4C, 9, and 14 all illustrate the rim layers as being homogeneous, unbroken, and separately discernable layers.

- Support for limitations directed to a plurality of layers of a rim material in physical contact with one another and stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked rim layers is provided in Applicant's specification at least as follows:

1) Paragraphs [0063] and [0065] state that a subsequent rim layer is extruded on top of a previously extruded layer, after the previously extruded layer has hardened, until a desired height is reached:

[0063] . . . *another rim layer may be extruded on top of the rim layer that has hardened. This may consist of a second exterior rim 413 being extruded on top of the first exterior rim 405 and a second interior rim 415 being extruded on top of the first interior rim 407. . . .*
[0065] *This process may be repeated until the height of the wall 403 reaches the needed level. . . .*

2) Paragraphs [0052] and [0055] state that the nozzle assembly is elevated after each horizontal pass, each time being **elevated in height** by approximately the thickness of each extruded layer.

[0052] . . . *The height of the trowel 107 may be adjusted to correspond to the height of the extruded layer 203. By making the height of the trowel 107 adjustable, layers of different thickness may be extruded. . . .*

[0055] . . . *the nozzle assembly 101 may be moved horizontally in a back-and-forth motion, **each time being elevated in height by approximately the thickness of each extruded layer***

3) FIG.s 4A, 4B, 4C, 9, and 14 illustrate a plurality of rim layers in physical contact with one another and stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked rim layer.

Moore

Applicant submits that the Moore document does not teach or suggest what is recited in Applicant's claim 18, as currently amended. At least the following limitations of claim 18, as currently amended, cannot be found in the Moore document: each rim includes a plurality of homogeneous, unbroken layers of a rim material, each layer in physical contact with one another other and stacked on top of one another in a vertical plane so that each layer is elevated in height with respect to a previously stacked layer.

Moore does not teach the above. Instead, Moore merely teaches opposite side panels, where each side panel is a discrete block, formed of a single block of material (e.g. polystyrene).

Moore describes each side panel as having a definite thickness, measured between the interior surface of the side panel and the exterior surface of the side panel. Therefore, Moore teaches away from the limitation of a plurality of layers, each layer elevated in height with respect to a previously stacked layer. See e.g. Moore document, col. 3, lines 1-3, 13-18, and 38-39 ("*A first embodiment of the present invention . . . comprises at least two opposed longitudinally-extending side panels 20, The presently preferred side panel 20 has a **thickness (separation between the interior surface 34 and the exterior surface 32)** of approximately two and a half (21/2) inches . . .*")

As seen from the above, Moore does not teach or suggest that each rim (corresponding to the side panel in Moore, according to the Examiner) includes a plurality of separately discernable rim layers that are stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a

previously stacked rim layer. Moore teaches away from this limitation, by explicitly teaching that the side panel has a single thickness between an interior and an exterior surface, rather than being a multi-layered structure.

The Examiner stated: *"Moore, Jr teaches a wall (Fig 2A, #10) having a set of spaced apart rims (Fig 2A, #20), a plurality of separate layers of a rim material, stacked on top on one another (Fig 1 shows multiple layers #20 stacked upon one another)."*

Applicant disagrees. Applicant notes that Fig 1 of Moore does not show each side panel as having multiple layers stacked upon one another. Even assuming, arguendo, that Fig 1 show different layers within a side panel, it is clear seen in Fig.1 of Moore that such layers are not stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked rim layer.

The Examiner further states: *"Fig 1 clearly shows layers stacked one upon another (the corner segment shows a double stacking and the ends show a single stacking). Each side panel is a separate layer."*

Applicant submits that claim 18 does not require each rim (corresponding to a side panel in Moore, according to the Examiner) to be a separate layer, contrary to the above statement, but merely that each rim include a plurality of layers.

Applicant further submits that, to the extent that each side panel may be viewed as a separate layer, it is clear from explicit descriptions in Moore that the side panels (each of which is a separate layer, according to the Examiner) in Moore are neither in physical contact with each other, nor stacked on top of one another in a vertical plane, contrary to the newly added limitations of claim 18:

See e.g. Moore Col. 1, lines 66-67 (*"The first embodiment uses opposed side panels that form a **cavity** therebetween. . . ."*); Col. 3, lines 25-28 (*"Referring now to FIGS. 1 and 2, the interior surface 43 of one side panel 20 faces the interior surface 34 of another side panel 20 . . . and the opposed interior surfaces 34 [of the side panel 20] are **laterally spaced apart from each other a desired separation distance** so that a **cavity 38** is formed therebetween."*)

As seen from the above, it is clear that, to the extent that each side panel in Moore can be considered to be a separate layer, Moore teaches that these layers are laterally spaced apart from each a desired separation distance, and not in physical contact with one another and stacked on top of one another

in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked rim layer.

For these reasons, Applicant respectfully submits that, by making the above-described amendments to claim 18, the Examiner's rejection of claim 18 in view of Moore has been overcome.

For all of these reasons, Moore fails to teach or suggest all the limitations of claim 18, as currently amended, and therefore does not anticipate the invention as recited in amended claim 18. Applicant respectfully submits that amended claim 18 is now allowable over Moore.

Melnick

Applicant submits that at least the following limitation of claim 18, as currently amended, cannot be found in the Melnick document: each rim includes a plurality of homogeneous, unbroken, and separately discernable layers of a rim material, each rim layer in physical contact with one another other and stacked on top of one another in a vertical plane so that each rim layer is elevated in height with respect to a previously stacked layer.

Nowhere in Melnick is there any teaching or suggestion of the above limitation. In contrast, Melnick teaches a plurality of individual foam blocks that are interconnected to form a wall structure. These blocks do not form unbroken layers that are in physical contact with one another.

The Examiner states "*Melnick et al teach a wall (Fig 1, #10 including concrete within) having a set of spaced apart rims (Fig 1, #12, #12' and #12''), a plurality of separate layers of a rim material, stacked on top on one another (Fig 1, #s 12, 12' and 12'')*".

Applicant submits that *Fig 1, #s 12, 12' and 12''* do not show any rims that each includes a plurality of homogeneous, unbroken layers of a rim material, each layer in physical contact with one another other.

To the extent that Fig 1 #12, #12' and #12'' of Melnick may be considered as showing separate layers of a rim material, it is clear from Fig 1, and from the supporting descriptions, that such layers are not in physical contact with one another other, but rather separated from each other by vertical connectors 40 and 70. See e.g. Melnick Col. 4, lines 43-44 ("**. . . Vertical connectors 40 rest between successive vertical layers of blocks. . . .**") and Col. 5, lines 19-20 ("**. . . The first vertical connector 40 rests between and connects successive vertical layers of the wall 12', 12'', 12'''**")

Further, it is also clear from Fig 1 and from supporting descriptions that such layers 12', 12'', 12''' are neither homogenous nor unbroken, but rather that each layer 12' and/or 12'' and/or 12''' are broken up into individual foam blocks, each including first and second panels 22, the panels 22 having core members 24 affixed thereto. Therefore, elements 12'12'' and 12''' are very different from the homogeneous unbroken layers recited in claim 18, which are described in Applicant's specification as being formed by sequential extrusion of layers of a fluid / semi-fluid material, each of which harden into a solid after extrusion.

For all of these reasons, Melnick fails to teach or suggest all the limitations of amended claim 18, and therefore does not anticipate the invention as recited in amended claim 18. Applicant respectfully submits that amended claim 18 is allowable over Melnick.

Bangma

The Examiner stated: "Claims 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bangma (5,749,196)." Applicant respectfully traverses.

Applicant submits that the Bangma document does not teach or suggest what is recited in Applicant's claim 18, as currently amended. At least the following limitations of amended claim 18 cannot be found in the Bangma document: a set of spaced apart rims, wherein each rim includes a plurality of homogeneous, unbroken layers of a rim material.

Bangma does not teach the above. Instead, Bangma teaches a building structure (e.g. wall) erected using rectangular construction elements that each includes two plate-like side parts that are mutually connected to each other by a connecting part.

In particular, Applicant notes that Fig 2 of Bangma does not show any plurality of homogeneous, unbroken layers of a rim material. Rather, Fig 2 of Bangma shows, and is described as showing, a plurality of construction elements, each including two plate-like side parts that are mutually connected by a connecting part. The portion of the connecting part extending above side parts is described as protruding between the side parts of the construction element located thereabove.

See e.g. Bangma document, Abstract ("*The invention relates to a building structure of a number of **construction elements** each comprising **two plate-like side parts (2) which are mutually connected** at a distance parallel to each other by at least one connecting part . . .*"); Col. 2, lines 32-52 ("*The construction element according to the invention shown in FIG. 1 comprises two plate-like side parts 2 which are mutually connected at a distance parallel to each other by a connecting part 3. . .*"); Col. 2, lines 47-52 ("*FIG. 2 shows a building structure 10 in the form of a wall*

*erected with construction elements 1 . . . the **portion of the connecting part 3 extending above side parts 2 protrudes between the side parts of the construction element located thereabove . . .***)

From the description above, and from the figures of Bangma, Applicant submits that Fig 2 (or any other figure) of Bangma fails to show a plurality of homogeneous, unbroken layers of a rim material.

To the extent that Fig 2 of Bangma can be viewed as showing a plurality of layers, Applicant submits that the layers shown in Bangma are not homogeneous, unbroken layers (as would result from extrusion of a layer of fluid / semi-fluid material that is cured to harden), but rather that each “layer” is broken up into distinct rectangular construction elements, each element including plate-like side parts and a protruding connecting part.

For all of these reasons, Bangma fails to teach or suggest all the limitations of amended claim 18, and therefore does not anticipate the invention as recited in amended claim 18. Applicant respectfully submits that amended claim 18 is allowable over Bangma.

Winter

The Examiner stated: “Claims 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Winter IV (4,833,855).” Applicant respectfully traverses.

Applicant submits that Winter does not teach or suggest at least the following limitation of claim 18, as currently amended: a set of spaced apart rims, wherein each rim includes a plurality of homogeneous, unbroken, and separately discernable layers of a rim material, each layer in physical contact with one another other and stacked on top of one another in a vertical plane so that each layer is elevated in height with respect to a previously stacked layer.

Instead, Winter teaches a prefabricated panel that has joints on the vertical edges thereof, so that the panels can be glued together at the edges to form a wall.

See e.g. Winter, Col. 3, lines 56-58 (“*FIGS. 1 and 2 illustrates a prefabricated panel 10 showing the captured scarf joint 30 used to join two panels together to form a wall. . .*”)

In particular, Applicant notes that Fig 3 of Winter (referred to by the Examiner in the Office Action) does not show any plurality of homogeneous, unbroken layers of a rim material, each layer in physical contact with each other and stacked on top of one another. Rather, Fig 3 of Winter shows, and is

described as showing, disjoint prefabricated panels which can be joined to each other at the edges to form a wall.

To the extent that Fig 3 of Winter may be viewed as showing a plurality of layers of a rim material, it is clear that Fig 3 of Winter does not show homogeneous, unbroken layers stacked on top of one another. Rather, any "layer" made of the prefabricated panels 10 would be broken up into distinct prefabricate panels, each panel including vertical and horizontal edges 16, 18, and 20, each panel further including inner and outer skins 22 and 24, and an insulative core 12 having flat opposing surfaces. See e.g. Winter Col. 3 line 58 – Col. 4 line 7 (*. . . a prefabricate panel 10 . . . has an insulative core 12 which core 12 has substantially flat opposed surfaces 14 On one of the flat surfaces 14 is an outer skin 24 which is material such as plywood. . . The other flat surface 14 has an inner skin 22 which may be gypsum board The panel is . . . fabricated . . . with vertical edges 16 and 18 and two horizontal edges 20. . . .*).

From the description above, and from all the figures and supporting descriptions in Winter, Applicant submits that any layers shown in Winter are clearly not homogeneous, unbroken layers (as would result from extrusion of a layer of fluid / semi-fluid material that is cured to harden), but rather that any layer in Winter is broken up into distinct prefabricated panels, each panel including a core with outer and inner skins, each panel including vertical and horizontal edges.

For all of these reasons, Winter fails to teach or suggest all the limitations of amended claim 18, and therefore does not anticipate the invention as recited in amended claim 18. Applicant respectfully submits that amended claim 18 is allowable over Winter.

CLAIMS 19-23

Claims 19-23 depend on claim 18, and therefore include all the limitations of claim 18. For all the reasons discussed above, neither the Moore document, nor the Melnick document, nor the Bangma document, nor the Winter document anticipates amended claim 18 under 35 U.S.C. § 102 (b). It follows that claims 19-23 (all depending from claim 18) also are not anticipated by Moore or Melnick or Bangma or Winter under 35 U.S.C. §102(b), at least because they depend from an allowable claim.

Applicant submits that claims 19-23, which now depend from amended claim 18, are allowable.

CONCLUSION

On the basis of the foregoing amendments, Applicant respectfully submits that all of the pending claims 1-23, including 1-11 and 18-23 as well as allowed claims 12-17, are now in condition for allowance. An early and favorable action is therefore earnestly solicited.

Respectfully submitted,

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